Filing Date: November 26, 2003 Title: TRACKING AUTO

TRACKING AUTOMATIC GAIN CONTROL

Dkt: 1899.002US1

IN THE CLAIMS

Please amend the claims as follows.

(Currently Amended) A receiver comprising:

 a detector to acquire a wireless signal;
 an automatic gain control to provide gain for the acquired wireless signal; and
 a control unit having programmable acquisition, hold, and release parameters to manage

the acquisition and gain of the wireless signal based on a transmission protocol <u>for a communication session</u> with intermittent wireless transmissions,

wherein the control unit is adapted to use the programmable acquisition parameter for use in attacking and locking onto an incoming signal, the programmable hold parameter for use in maintaining sensitivity for the incoming signal at a relatively constant level, and the programmable release parameter for use in increasing the sensitivity to detect a subsequent incoming signal, and

wherein the control unit is adapted to use the programmable acquisition, hold, and release parameters for the transmission protocol to anticipate intermittent wireless transmissions in the communication session and manage the acquisition and gain accounting for the anticipated intermittent wireless transmissions.

- 2. (Original) The receiver of claim 1, wherein the control unit is programmed with a plurality of sets of acquisition, hold, and release parameters, each set related to a different transmission protocol.
- 3. (Original) The receiver of claim 1, wherein the control unit is programmed with a plurality of sets of acquisition, hold, and release parameters, each set related to a different transmitting unit.

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4. (Original) The receiver of claim 1, wherein the wireless signal is a signal using an

electrostatic field.

5. (Original) The receiver of claim 1, wherein the wireless signal is a signal using an

magnetic field.

6. (Original) The receiver of claim 1, wherein the wireless signal is a signal using an

electromagnetic field.

7. (Original) The receiver of claim 1, wherein the wireless signal is an RF signal.

8. (Original) The receiver of claim 1, wherein the control unit is adapted to regulate the

automatic gain control to adjust a gain to a minimal level for detection of a wireless signal for a

predetermined amount of time according to the transmission protocol.

9. (Original) The receiver of claim 1, wherein the control unit is adapted to issue a hold

command to the automatic gain control to maintain sensitivity for a next wireless transmission in

a communication session defined by a transmission protocol that provides control and

transmission information.

10. (Previously Presented) The receiver of claim 9, wherein the hold command to the

automatic gain control includes a length of time to maintain the sensitivity.

11. (Previously Presented) The receiver of claim 1, wherein the control unit is adapted to

issue a hold command to the automatic gain control for a predetermined gain level to minimize

the acquisition time for a wireless signal for a new communication session.

12. (Original) The receiver of claim 1, wherein the control unit is adapted to regulate the

automatic gain control to increase a sensitivity when a communication session is ended.

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13. (Original) The receiver of claim 1, wherein the control unit is adapted to regulate the automatic gain control to increase sensitivity when a wireless signal is not present during a period in a communication session in which the transmission protocol indicates a wireless transmission is scheduled.

14. (Currently Amended) A system comprising:

a receiver to receive wireless data signals; and

a processor responsive to the wireless data signals, wherein the receiver includes:

a detector to acquire a wireless signal;

an automatic gain control to provide gain for the acquired wireless signal; and a control unit having programmable acquisition, hold, and release parameters to manage the acquisition and gain of the wireless signal based on a transmission protocol for a communication session with intermittent wireless transmissions,

wherein the control unit is adapted to use the programmable acquisition parameter for use in attacking and locking onto an incoming signal, the programmable hold parameter for use in maintaining sensitivity for the incoming signal at a relatively constant level, and the programmable release parameter for use in increasing the sensitivity to detect a subsequent incoming signal, and

wherein the control unit is adapted to use the programmable acquisition, hold, and release parameters for the transmission protocol to anticipate intermittent wireless transmissions in the communication session and manage the acquisition and gain accounting for the anticipated intermittent wireless transmissions.

- 15. (Original) The system of claim 14, wherein the control unit is programmed with a plurality of sets of acquisition, hold, and release parameters, each set related to a different transmission protocol.
- 16. (Original) The system of claim 14, wherein the control unit is programmed with a plurality of sets of acquisition, hold, and release parameters, each set related to a different transmitting unit.

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17. (Original) The receiver of claim 14, wherein the wireless signal is a signal using an

electrostatic field.

(Original) The receiver of claim 14, wherein the wireless signal is a signal using an 18.

magnetic field.

19. (Original) The receiver of claim 14, wherein the wireless signal is a signal using an

electromagnetic field.

20. (Original) The system of claim 14, wherein the wireless signal is an RF signal.

21. (Original) The system of claim 14, wherein the control unit regulates the automatic gain

control to adjust a gain to a minimal level for detection of an wireless signal for a predetermined

amount of time according the protocol.

22. (Original) The system of claim 14, wherein the control unit is adapted to issue a hold

command to the automatic gain control to maintain sensitivity for a next wireless transmission in

a communication session defined by a transmission protocol that provides control and

transmission information.

23. (Original) The system of claim 14, wherein the control unit is adapted to issue a hold

command for a predetermined gain level to minimize the acquisition time for a wireless signal in

a next communication session.

24. (Original) The system of claim 14, wherein the control unit is adapted to increase a

sensitivity when a communication session is ended.

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(Original) The system of claim 14, wherein the control unit is adapted to increase a

sensitivity when a wireless signal is not present at a time in communication session in which the

transmission protocol indicates a scheduled wireless transmission.

26. (Original) The system of claim 14, wherein the control unit regulates the automatic gain

control to adjust a gain to a minimal level to detect a wireless signal for a predetermined amount

of time according to the transmission protocol to minimize unnecessary and unwanted

amplification of electromagnetic interference during a data off portion of the wireless modulated

transmission.

27. (Original) The system of claim 14, wherein the system is a hearing aid.

28. (Original) The system of claim 14, wherein the system further includes a transmitting

subsystem.

29. (Previously Presented) The system of claim 28, wherein the transmitting subsystem is in

a first hearing aid and the receiver is in a second hearing aid.

30. (Previously Presented) The system of claim 28, wherein the transmitting subsystem is in

a first hearing aid programming unit, and the receiver is in a hearing aid.

31. (Currently Amended) A method comprising:

detecting wireless energy;

determining whether the detected wireless energy corresponds to a communication

session with intermittent wireless transmissions;

determining a transmission protocol to operate an automatic gain control for the

communication session; and

managing the automatic gain control to regulate gain by according to the determined

transmission protocol, including using the determined transmission protocol to anticipate

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intermittent wireless transmissions in the communication session, and managing the automatic gain accounting for the anticipated intermittent wireless transmissions.

32. (Original) The method of claim 31, wherein determining a transmission protocol includes determining periods of time for gain levels associated with the communication session.

33. (Original) The method of claim 31, wherein detecting wireless energy includes detecting energy of an electrostatic field.

- 34. (Original) The method of claim 31, wherein detecting wireless energy includes detecting energy of a magnetic field.
- 35. (Original) The method of claim 31, wherein detecting wireless energy includes detecting energy of an electromagnetic field.
- 36. (Original) The method of claim 31, wherein detecting wireless energy includes detecting RF energy.
- 37. (Original) The method of claim 31, wherein managing the regulation of gain by the automatic gain control includes sending control signals to the automatic gain control to adjust a gain to a minimal level for detection of a wireless signal for a predetermined amount of time according the protocol.
- 38. (Original) The method of claim 31, wherein managing the regulation of gain by the automatic gain control includes sending a hold command to the automatic gain control to maintain sensitivity for a next wireless transmission in a communication session defined by a transmission protocol that uses intermittent information transmittal.

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39. (Original) The method of claim 31, wherein managing the regulation of gain by the automatic gain control includes sending a hold command for a predetermined gain level to minimize the acquisition time for a wireless signal in a next communication session.

- 40. (Original) The method of claim 31, wherein managing the regulation of gain by the automatic gain control includes sending control signals to the automatic gain control to increase a sensitivity when a communication session is ended.
- 41. (Original) The method of claim 31, wherein managing the regulation of gain by the automatic gain control includes sending control signals to the automatic gain control to increase a sensitivity when a wireless signal is not present at a time in communication session in which the transmission protocol indicates a scheduled wireless transmission.
- 42. (Original) The method of claim 31, wherein the method further includes performing the method in a hearing aid.
- 43. (Original) The method of claim 31, further including transmitting a wireless signal.
- 44. (Original) The method of claim 31, wherein the method further includes transmitting a wireless signal from a hearing aid for a communication session with another hearing aid that receives the wireless signal.
- 45. (Original) The method of claim 31, wherein the method further includes transmitting a wireless signal from a hearing aid programming unit for a communication session with a hearing aid that receives the wireless signal.